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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/620,344	07/17/2003	Hsin-Tang Chien	4392-0136P	8676
2292	7590	04/03/2006	EXAMINER	
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FALLS CHURCH, VA 22040-0747			ART UNIT	PAPER NUMBER
			2875	

DATE MAILED: 04/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.	10/620,344		Applicant(s)
Examiner	Art Unit Hargobind S. Sawhney		2875

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM  
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

1) Responsive to communication(s) filed on 20 January 2006.

2a) This action is FINAL.                            2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

4) Claim(s) 1-10 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) 2 and 7 is/are allowed.

6) Claim(s) 1,3-6 and 8-10 is/are rejected.

7) Claim(s) \_\_\_\_\_ is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All    b) Some \* c) None of:

1. Certified copies of the priority documents have been received.

2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.

3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date _____ 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) 6) <input type="checkbox"/> Other: _____
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## DETAILED ACTION

1. The amendment filed on January 20, 2006 has been entered. Accordingly, claims 1 and 3-5 have been amended.
2. The Office Action Summary (PTO 326) mailed with the previous non-final office action was erroneously marked as "Final Action". The above office action summary needs to be considered as Non-Final Action.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1 and 3 are rejected under 35 U.S.C. 102(e) as being anticipated by Zou et al. (US Patent No.: 6,550,942 B1).

Regarding amended Claim 1, lines 1-5, it has been held that the recitations: "a scanning device"; "for emitting a light beam onto said object"; and "the lamp being substantially parallel to the second line defined by the two ends of the object", with respect to the manner in which a claim apparatus is intended to be employed does not

differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitation. The above-indicated recitations have not been given patentable weight, as none of them is a part of the claimed matter.

Regarding Claim 1, Zou et al. ('942 B1) discloses a lamp assembly 500 (Figure 14, column 11, line 48) comprising:

- a lamp 502 (Figure 14, column 11, line 53) with two ends, and the lamp 502 able to emit light beam onto an object (not shown); and
- a transparency 516 disposed between the lamp 500 and an object (not shown), and the transparency 516 including a first surface receiving the light beam, and a second surface including a plurality of refractors 518 (Figure 14, column 11, lines 55-62);
- the light beam emitted from the lamp 502 passing through the transparency 516 (Figure 14);
- the plurality of refractors 518 configured – shaped- to deflect the refracted light beam toward the two ends of the object (Figure 14, column 11, lines 55-64).

Note: The limitation " a plurality of refractors configured to refract said light beam to deflect toward the two ends of object" relates to the size of the object in relation with the size of the lamp. The object having same length as that of the linear light source would require substantially collimated light beams, whereas the object having either larger or smaller size would require deflected light, non-collimated- beams.

Regarding amended Claim 3, lines 1-5, it has been held that the recitations: "a scanning device" "a scanning device" "for emitting a light beam onto said object"; and "the lamp being substantially parallel to the second line defined by the two ends of the object", with respect to the manner in which a claim apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitation. The above-indicated recitations have not been given patentable weight, as none of them is a part of the claimed matter.

Regarding claim 3, Zou et al. ('942 B1) discloses a lamp assembly 500 (Figure 14, column 11, line 48) comprising:

- a lamp 502 (Figure 14, column 11, line 53) with two ends, and the lamp 502 able to emit light beam onto an object (not shown); and
- a tube 504 surrounding the lamp 502; and the tube 504 comprising a plurality of refractors 518 for refracting light beams (Figure 14, column 11, lines 55-62);
- the plurality of refractors 518 configured – shaped- to deflect the refracted light beam toward the two ends of the object (Figure 14, column 11, lines 55-64).

Note: The limitation " a plurality of refractors configured to refract said light beam to deflect toward the two ends of object" relates to the size of the object in relation with the size of the lamp. The object having same length as that of the linear light source would require collimated light beams, where as the object having either larger or smaller size would require deflected light beams.

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5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 4 and 5 are rejected under 35 U.S.C. 102(e) as being anticipated by Swarens (US Patent NO.: 5,988,836).

Regarding amended claims 4 and 5, it has been held that the recitations: "a scanning device"; "for emitting a light beam onto said object", with respect to the manner in which a claim apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitation. The above-indicated recitations have not been given patentable weight, as none of them is a part of the claimed matter.

Swarens ('836) discloses a lamp 14 (Figures 2 and 3 comprising:

- two ends defining a line substantially parallel to the line defined by the two ends of the object (not shown, the illuminated area of the floor) (Figures 1-3);
- a convex plate 18 – a reflector 18 - disposed over the lamp 14; the convex plate reflecting light beams (Figures 1-3, column 4, lines 19-31), which are deflected toward the ends of the object – the light beam spread is interpreted as the light beams deflected toward the object (not shown); and

the convex plate 18- the reflector 18 – including identical reflection units – left and right halves of the reflector 18 – (Figures 1-3).

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 6 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zou et al. (US Patent No.: 6,550,942 B1) in view of Wun et al. (US Patent No.: 5,469,303)

Regarding Claim 6, Zou et al. ('942 B1) discloses a lamp assembly 500 (Figure 14, column 11, line 48) comprising a linear light source. Although, Zou et al. ('942 B1) does not specifically teach the linear light source being a fluorescent tube in his invention, it discloses a fluorescent tube as a linear light source being used in the Description of the Prior Art (Column 2, lines 4 and 5). Further, Zou et al. ('942 B1) does not specifically teach the linear light source – fluorescent tube – emitting more light at its central portion than that at its both of the two ends.

On the other hand, Wun et al ('303) discloses a linear light source – fluorescent tube 23 usable for a scanner (Figure 2, column 2, lines 12 and 13). Additionally, Wun et al ('303) teaches the inherent deficiency or characteristic of a fluorescent lamp usually

emitting more light at its central portion than that at its both of the two ends (Figure 1, column 1, lines 21-26).

It would be have been obvious to one of ordinary skill in the art at the time of the invention to make use of a fluorescent tube as a linear light source as taught by the prior art description included in Zou et al. ('942 B1) itself, and realize inherent deficiency of emitting more light at its central portion than that at its both of the two ends as taught by Wun et al ('303). IN addition the use of fluorescent tube would provide the needed illumination at relatively low temperature illuminator for a scanner.

Regarding each of claim 8, dependent on claim 3, Zou et al. ('942 B1) in view of Wun et al ('303) discloses a lamp assembly meeting the limitations in similar manner as that applied for claim 6 detailed above.

9. Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Swarens (US Patent NO.: 5,988,836) in view of Wun et al. (US Patent No.: 5,469,303)

Regarding claim 9, Swarens ('836) discloses a lamp assembly comprising a fluorescent lamp as a linear light source. However, Swarens ('836) does not specifically teach the linear light source – fluorescent tube – emitting more light at its central portion than that at its both of the two ends.

On the other hand, Wun et al ('303) discloses a linear light source – fluorescent tube 23 usable for a scanner (Figure 2, column 2, lines 12 and 13). Additionally, Wun et al ('303) teaches the inherent deficiency or characteristic of a fluorescent lamp usually emitting more light at its central portion than that at its both of the two ends (Figure 1, column 1, lines 21-26).

It would be have been obvious to one of ordinary skill in the art at the time of the invention to realize the inherent deficiency of emitting more light at its central portion than that at its both of the two ends as taught by Wun et al ('303).

Regarding each of claim 10,, dependent on claim 5, Zou et al. ('942 B1) in view of Wun et al ('303) discloses a lamp assembly meeting the limitations in similar manner as that applied for claim 9 detailed above.

### ***Allowable Subject Matter***

10. Claims 2 and 7 are allowed.

The prior art of record, including Zou et al. ('942 B1) and Swarens ('836) does not show or suggest the applicant's invention as claimed. Specifically, the prior art of record does not disclose a lamp for a scanning device combining:

- a tube surrounding a lamp, and the tube further including its central part with larger thickness than the thickness at its end portions as recited in Claim 2.

The combination of the features, including a tube encasing the lamp; and the tube having variable wall thickness, makes this disclosure unique.

Neither combined nor individual teaching of Zou et al. ('942 B1) and Swarens ('836) discloses the above-indicated a tube surrounding a linear lamp, and further having its wall of variable thickness as detailed above. Therefore, the amended Claim 2 includes allowable subject matter.

Therefore, Claim 2 in allowed over prior art of the record.

Claim 7 is necessarily allowed because of its dependency on the allowed base claim 2.

***Response to Amendment***

11. Applicant's arguments filed on January 20, 2006 with respect to the 35 U.S.C. 102(e) rejections of claims 1, 3 and 4, and the 35 U.S.C. 102(b) rejections of claims 6, 8 and 9 have been fully considered but they are not persuasive.

Argument: Regarding claims 1, 3 and 4, Zou et al. ('942 B1) does not a scanning device comprising a transparency with a plurality of refractors for reflecting light beam to the side of the object.

Response: Regarding claims 1 and 3, Zou et al. ('942 B1) discloses a lamp including a transparency 516 disposed between the lamp 500 and an object (not shown), and the transparency 516 including a first surface receiving the light beam, and a second surface including a plurality of refractors 518 (Figure 14, column 11, lines 55-62).

In addition, Zou et al. ('942 B1) teaches that the refractors 518 configured to collimate or focus or shape- convergent or divergent - the light beams depending on the need (Figure 14, Column 11, lines 55-64).

The limitation " a plurality of refractors configured to refract said light beam to deflect toward the two ends of object" relates to

the size of the object in relation with the size of the lamp. The object having same length as that of the linear light source would require substantially collimated light beams, whereas the object having either larger or smaller size would require deflected light beams.

As detailed above, Zou et al. ('942 B1) meets the limitations of each of the claims 1 and 3.

12. Applicant's arguments filed on January 20, 2006 with respect to the 35 U.S.C. 102(e) rejections of claims 4 and 5; and 35 U.S.C. 103(a) rejections of claims 9 and 10 have been fully considered but are moot in view of the new ground(s) of rejections necessitated by the amendment indicated above.

### ***Conclusion***

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Huisingsh et al. (U.S. Patent No.5,115,380), Huisingsh et al. (U.S. Patent No. 5,040,1041), Fabbri (U.S. Patent No. 4,233,651), Shemitz (U.S. Patent No. 4,054,793) and Rolph (U.S. Patent No. 3,179,796)

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hargobind S. Sawhney whose telephone number is 571 272 2380. The examiner can normally be reached on 8:15 AM - 4:45 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra O'Shea can be reached on 571 272 2378. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

HSS  
3/24/2006

  
ALI ALAVI  
PRIMARY EXAMINER